

FIG.1

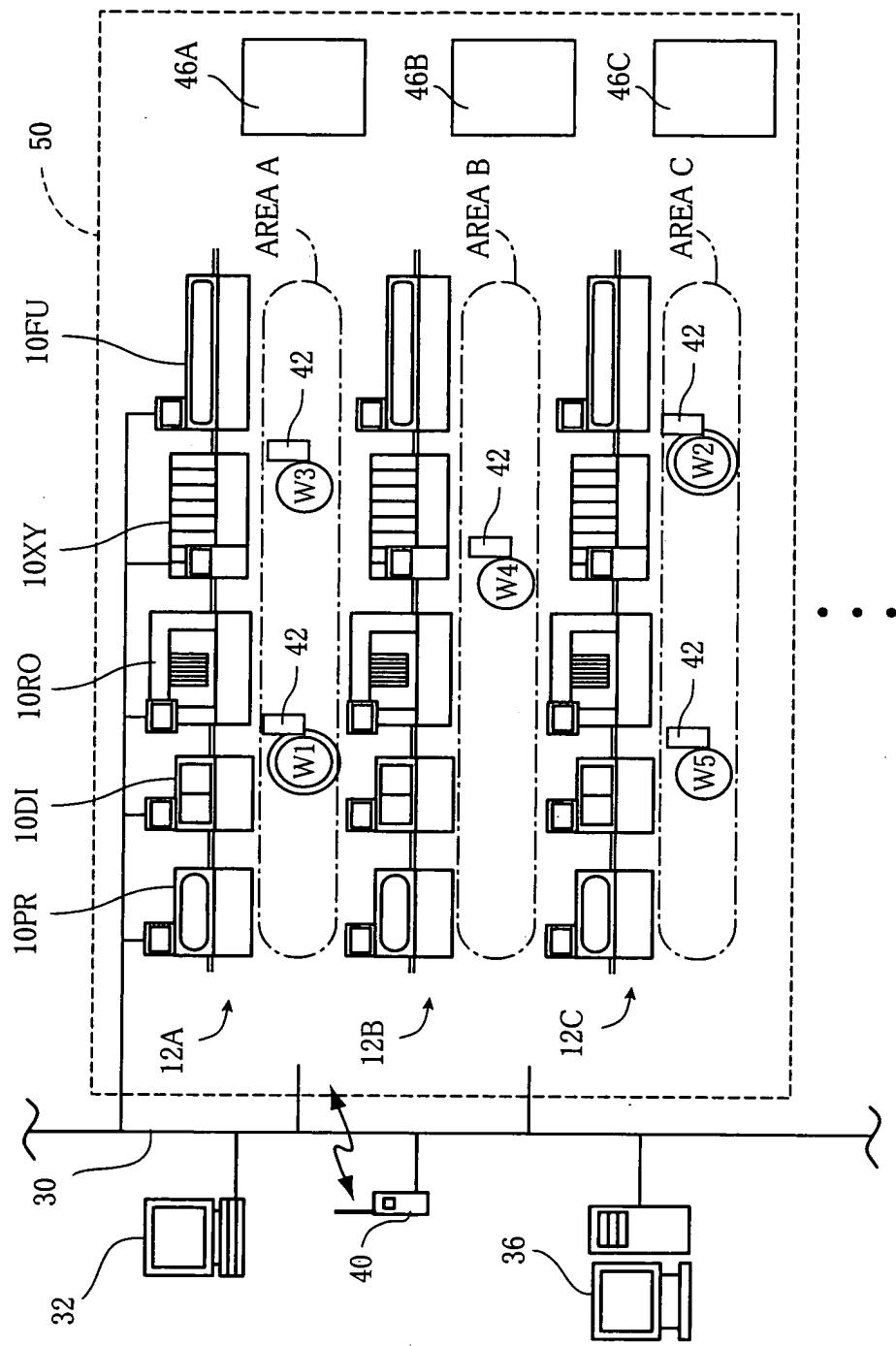


FIG.2

(UNITS:SECONDS)						
NAME OF WORK	SORT	OBJECTIVE MACHINE	STOPPING OF MACHINE	NEEDED SKILL LEVEL	STANDARD NEEDED TIME	ARRIVAL-TIME ADJUSTING TIME
SOLDER SUPPLY	SUPPLYING	SCREEN-PRINTING MACHINE	YES	H	180	-30
SYRINGE REPLACEMENT	SUPPLYING	ADHESIVE APPLYING MACHINE	YES	L	150	-30
FEEDER REPLACEMENT RO	SUPPLYING	SCREEN-PRINTING MACHINE	NO	L	30	-30
FEEDER REPLACEMENT XY	SUPPLYING	COMPONENT MOUNTING MACHINE	YES	L	60	-30
REEL REPLACEMENT XY	SUPPLYING	COMPONENT MOUNTING MACHINE	NO	L	40	-120
NOZZLE REPLACEMENT XY	RECOVERING	COMPONENT MOUNTING MACHINE	YES	H	60	-
IMAGE-RECOGNITION-CONDITION ADJUSTMENT	RECOVERING	COMPONENT MOUNTING MACHINE	YES	H	300	-
SOLDER-AMOUNT ADJUSTMENT	RECOVERING	SCREEN-PRINTING MACHINE	YES	H	300	-
HEATING-CONDITION ADJUSTMENT	RECOVERING	REFLOW FURNACE	YES	H	300	-

FIG. 3

WORKER No.	WORKER SKILL LEVEL	RESPONSIBILITY SECTION
W1	H	A, B, C
W2	H	A, B, C
W3	L	A, B, C
W4	L	A, B, C
W5	L	A, B, C

FIG. 4

WORKER No.	WORKING STATE	CURRENT POSITION	ASSIGNED WORK	SCHEDULED STARTING TIME OF ASSIGNED WORK	SCHEDULED FINISHING TIME OF ASSIGNED WORK	WORK FINISHING POSITION	TEMPORARILY ASSIGNED WORK	WORKER INTENTION	TOTAL TIME OF ACTUAL WORKS	FINISHING TIME OF PREVIOUS WORK
W1	WAITING	A				A	(N7)	(Y)	63 MIN	13:42:20
W2	WAITING	C				C	(N7)	(Y)	66 MIN	13:51:10
W3	WAITING	A	N3, N6	14:00:10	14:03:30	A			224 MIN	13:55:40
W4	WAITING	B	N2	14:00:40	14:02:40	B			231 MIN	13:57:20
W5	WORKING	C	N1, N4, N5	13:59:20	14:03:40	C			228 MIN	13:56:50

FIG. 5

WORK-ID	WORK-OBJECT-CODE	WORK NAME	PRIORITY-ORDER-TIME	RECOM-MENDED-ARRIVAL-TIME	MATERIAL-SHORTAGE-TIME	STANDARD-NEEDED-TIME	MATERIAL-CODE	NEEDED-SKILL-LEVEL	RESPONSIBLE-WORKER	NEAR-CONTINUOUS-WORK
N1	C-XY-507	REEL REPLACEMENT	14:01:20	14:00:20	14:02:20	40	C-416	L	W5	2
N2	B-XY-315	FEEDER XY REPLACEMENT	14:01:40	14:01:40	14:02:10	60	I-266	L	W4	0
N3	A-XY-306	REEL REPLACEMENT	14:02:10	14:01:10	14:03:10	40	C-556	L	W3	1
N4	C-XY-102	REEL REPLACEMENT	14:02:30	14:01:30	14:03:30	40	C-492	L	W5	N1
N5	C-XY-411	FEEDER XY REPLACEMENT	14:02:40	14:02:40	14:03:10	60	P-646	L	W5	N1
N6	A-RO-116	FEEDER RO REPLACEMENT	14:04:00	14:03:00	14:03:00	30	C-376	L	W3	N3
N7	B-PR-CH	SOLDER SUPPLY	14:04:30	14:04:30	14:05:00	180	CH-08	H	(W1)	(0)
N8	C-XY-213	FEEDER XY REPLACEMENT	14:05:40	14:05:40	14:06:10	60	I-461	L	(W5)	(1)
N9	B-XY-504	REEL REPLACEMENT	14:05:50	14:04:50	14:06:50	40	C-496	L	(W4)	(1)
N10	B-XY-607	REEL REPLACEMENT	14:06:50	14:05:50	14:07:50	40	P-752	L	(W4)	(N9)
N11	A-DI-GL1	SPRINGE REPLACEMENT	14:07:00	14:07:00	14:07:30	150	GL-60	L	(W3)	(0)
N12	C-RO-205	FEEDER RO REPLACEMENT	14:08:00	14:07:00	14:07:00	30	C-256	L	(W5)	(N8)
N13	A-XY-612	FEEDER XY REPLACEMENT	14:08:00	14:08:00	14:08:30	60	T-615	L	(W4)	(1)
N14	C-PR-CH	SOLDER SUPPLY	14:09:10	14:09:10	14:09:40	180	CH-08	H	(W2)	(0)
N15	A-XY-203	REEL REPLACEMENT	14:10:20	14:09:20	14:11:20	40	T-344	L	(W4)	(N13)

FIG.6

WORK ID	WORK- OBJECT CODE	WORK NAME	URGENCY DEGREE	OCCURRENCE TIME	STANDARD NEEDED TIME	REPLACEMENT COMPONENT CODE	RESPONSIBLE WORKER	SIMULTANEOUS WORK
E1	C-XY-4N3	NOZZLE REPLACEMENT	L	14:00:10	60	NX12	(W2)	(N5)

FIG.7

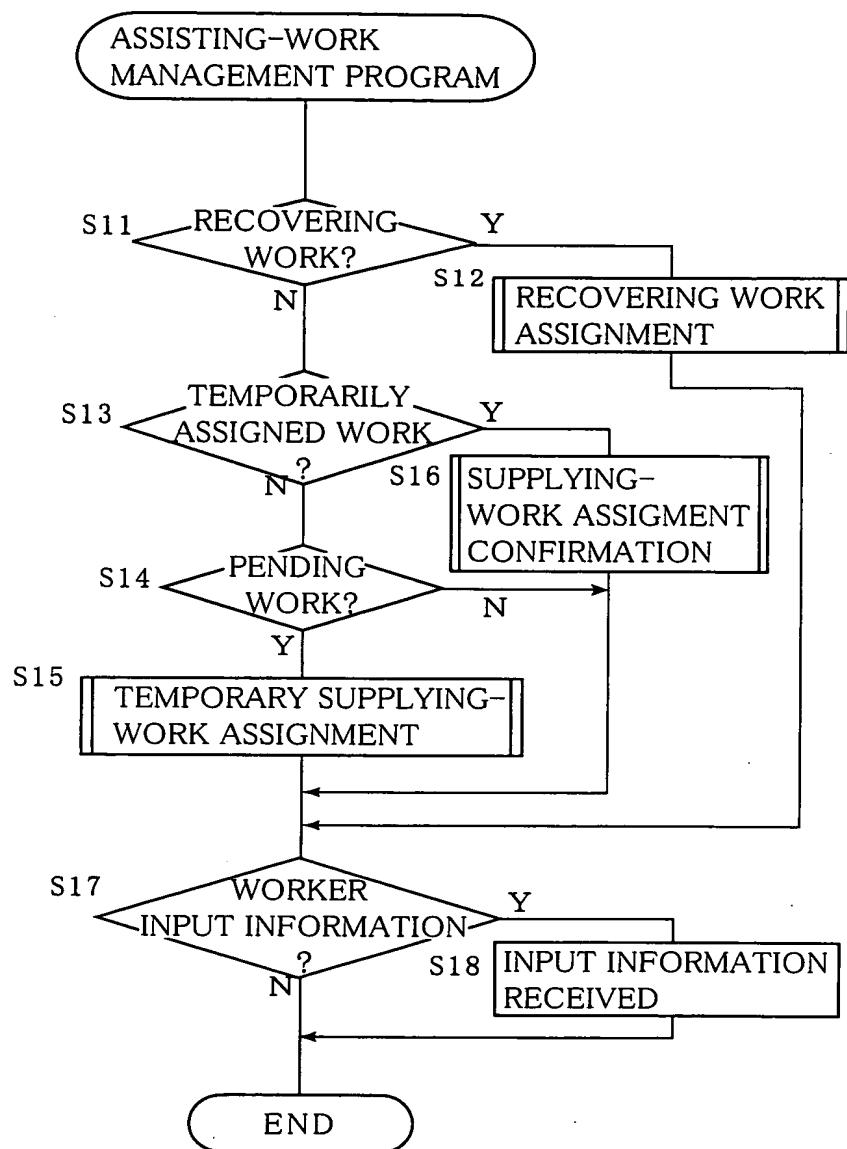


FIG.8

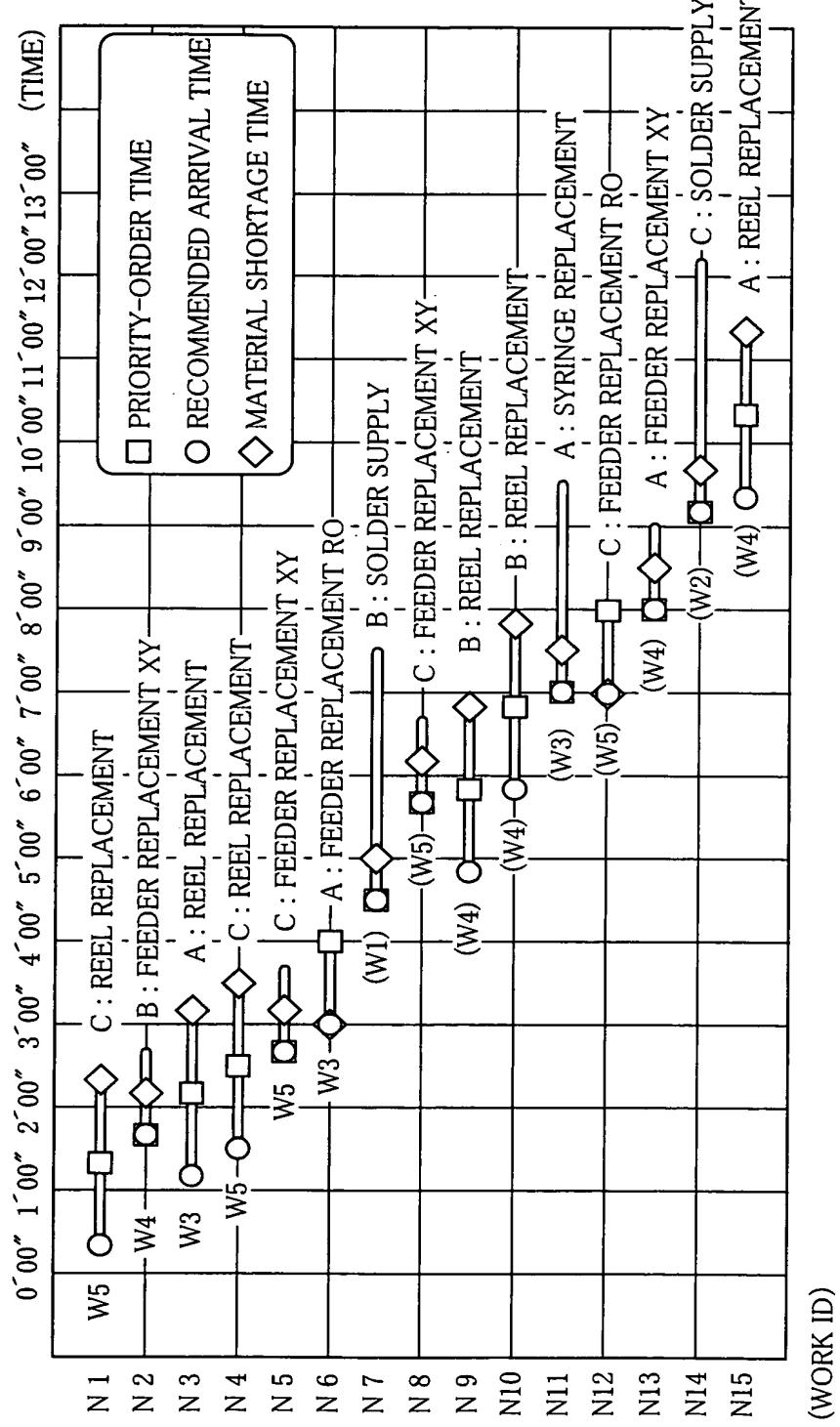


FIG.9

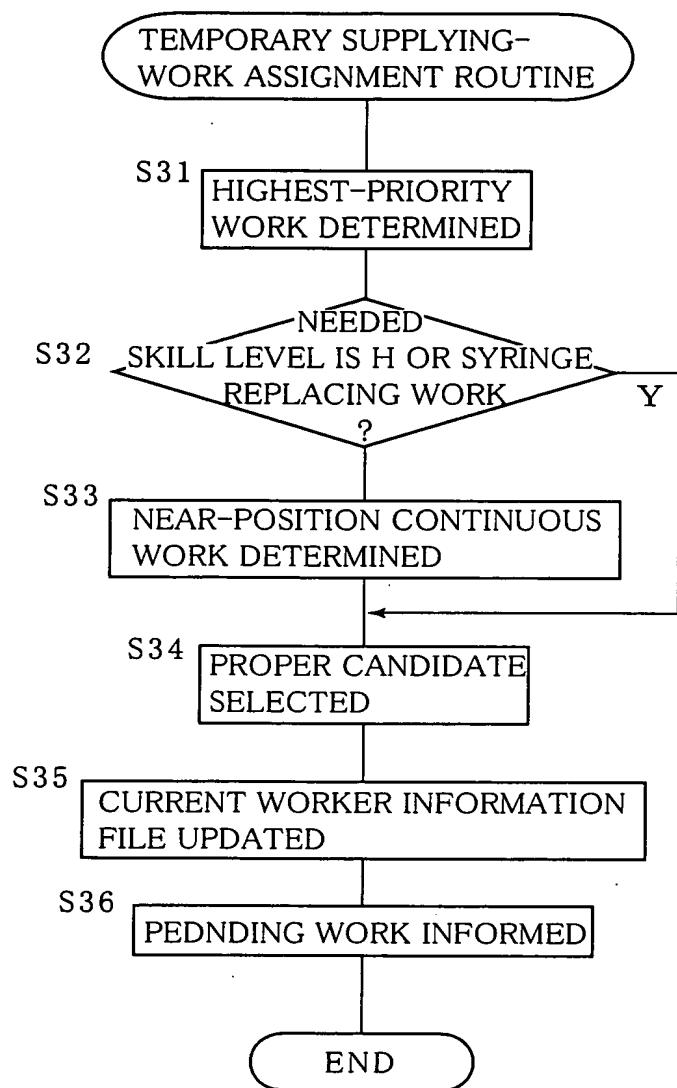


FIG.10

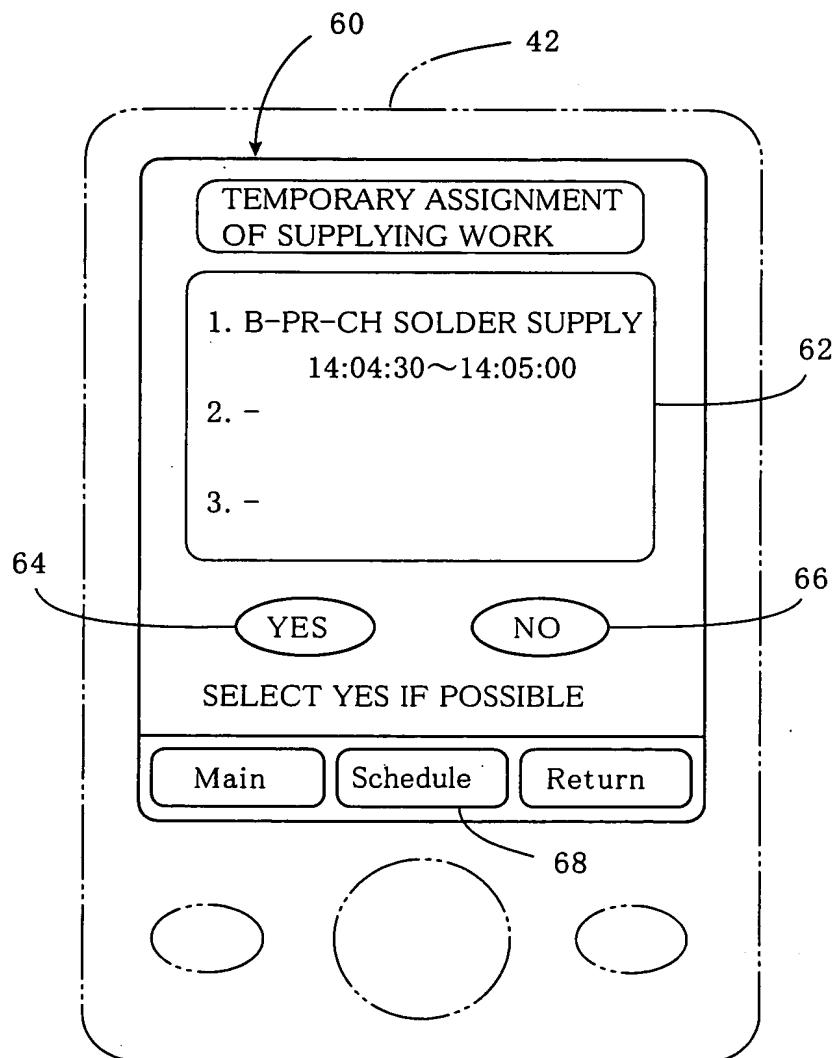


FIG.11

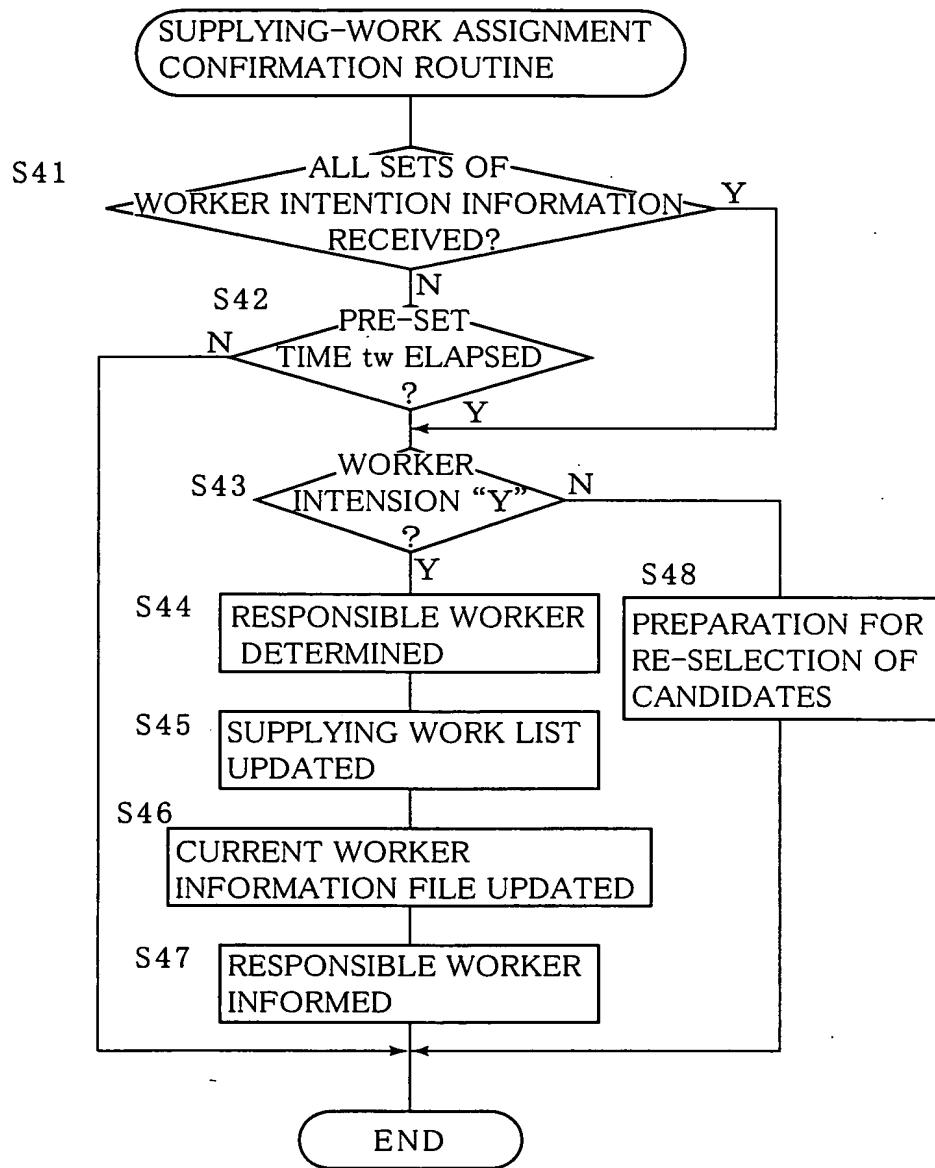


FIG. 12

WORKER No.	WORKING STATE	CURRENT POSITION	ASSIGNED WORK	SCHEDULED STARTING TIME OF ASSIGNED WORK	SCHEDULED FINISHING TIME OF ASSIGNED WORK	WORK FINISHING POSITION	TEMPORARILY ASSIGNED WORK	WORKER INTENTION	TOTAL TIME OF ACTUAL WORKS	FINISHING TIME OF PREVIOUS WORK
W1	WAITING	A	N7	14:04:30	14:07:30	B			63 MIN	13:42:20
W2	WAITING	C				C			66 MIN	13:51:10
W3	WORKING	A	N3, N6	14:00:10	14:03:30	A			224 MIN	13:55:40
W4	WAITING	B	N2	14:00:40	14:02:40	B			231 MIN	13:57:20
W5	WAITING	C	N4, N5	14:01:30	14:03:40	C	(N8)	(Y)	230 MIN	14:01:00

FIG.13

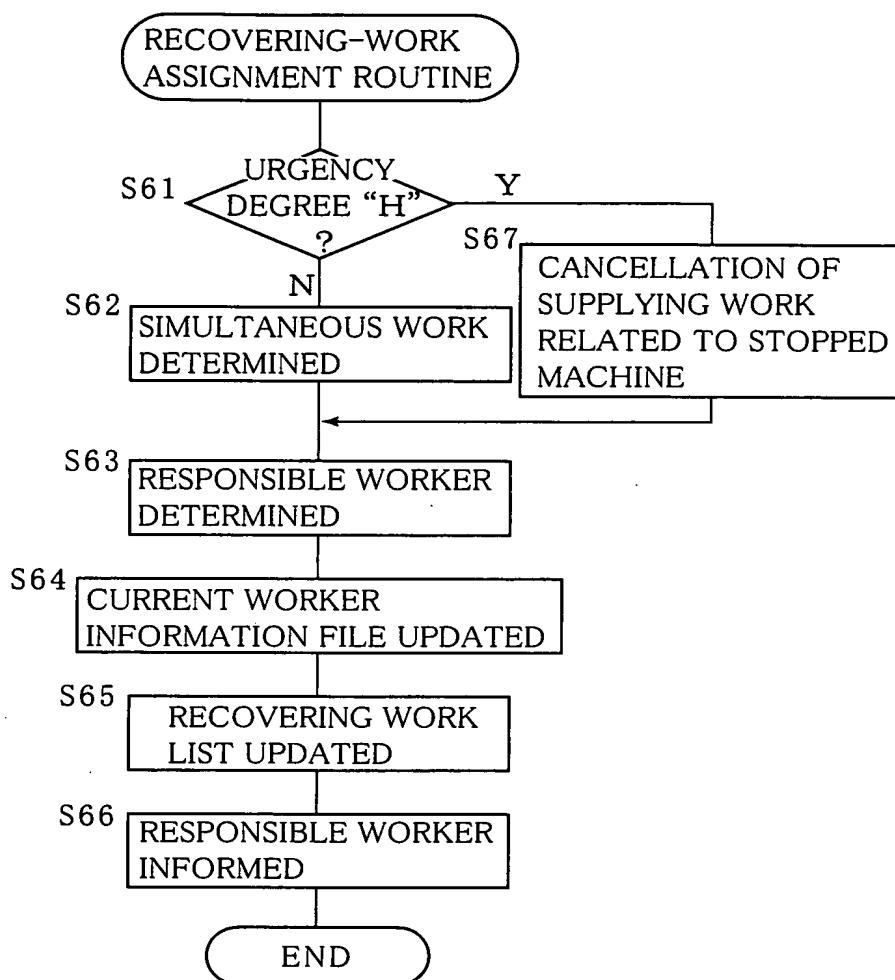


FIG. 14

WORK ID	WORK-OBJECT CODE	WORK NAME	URGENCY DEGREE	OCCURRENCE TIME	STANDARD NEEDED TIME	REPLACEMENT-COMPONENT CODE	RESPONSIBLE WORKER	SIMULTANEOUS WORK
E2	C-RO-PC	IMAGE-RECOGNITION-CONDITION-ADJUSTMENT	H	14:04:20	300		(W2)	

FIG. 15

WORKER No.	WORKING STATE	CURRENT POSITION	CURRENT ASSIGNED WORK	SCHEDULED STARTING TIME OF ASSIGNED WORK	SCHEDULED FINISHING TIME OF ASSIGNED WORK	WORK FINISHING POSITION	TEMPORARILY ASSIGNED WORK	WORKER INTENTION	TOTAL TIME OF ACTUAL WORKS	FINISHING TIME OF PREVIOUS WORK
W1	WAITING	B				B			63 MIN	13:42:20
W2	WAITING	C	E1	14:02:40	14:03:40	C			66 MIN	13:51:10
W3	WAITING	A	N3, N6	14:00:10	14:03:30	A			224 MIN	13:55:40
W4	WAITING	B	N2	14:00:40	14:02:40	B			231 MIN	13:57:20
W5	WAITING	C	N1, N4, N5	13:59:20	14:03:40	C			228 MIN	13:56:50

FIG. 16

WORKER No.	WORKING STATE	CURRENT POSITION	CURRENT ASSIGNED WORK	SCHEDULED STARTING TIME OF ASSIGNED WORK	SCHEDULED FINISHING TIME OF ASSIGNED WORK	WORK FINISHING POSITION	TEMPORARILY ASSIGNED WORK	WORKER INTENTION	TOTAL TIME OF ACTUAL WORKS	FINISHING TIME OF PREVIOUS WORK
W1	WAITING	B	N7	14:04:30	14:07:30	B			63 MIN	13:42:20
W2	WAITING	C				C			67 MIN	14:03:40
W3	WAITING	A	N11	14:07:00	14:09:30	A			226 MIN	14:03:30
W4	WAITING	B	N9, N10, N13, N15	14:03:50	14:10:00	B			233 MIN	14:02:40
W5	WAITING	C	N8, N12	14:04:40	14:07:30	C			232 MIN	14:03:40

FIG. 17

